ETYMOTIC



ER•4 microPro™ earphones

ER•4PT User Manual

Thank you for your purchase of ER•4 MicroPro™ earphones, the world's most accurate earphones.

ACCU Technology™

ACCU•Driver™ high performance, balanced armature drivers are percision matched for an accuracy response of 86% or better.

INTRODUCTION

ER•4 MicroPro earphones were the first noise-isolating high-fidelity in-ear earphones to use ACCU•Driver™ high performance, balanced armature drivers. These high-definition transducers combine flat frequency response with passive noise isolation. Noise reduction with ER•4 earphones occurs naturally when the eartips are sealed in the ear canals.

Included with the earphones is the Channel-matching Compliance Graph showing frequency response curves of each custom-tuned, balanced armature driver.

An assortment of ACCU•Fit™ eartips is provided in this package. The triple-flange eartips reduce sound an average of 35 dB, which is approximately 98% noise reduction. The foam eartips provide slightly more (42 dB) sound reduction. Lowering outside sound allows you to hear the full dynamic range of the recording without having to play it at unsafe levels.

The ER•4 MicroPro series earphones produce the highest sound quality of any high-definition earphones on the market today. We hope you enjoy them.

Etymotic Research
You know your music. Etymotic know your ears.

SYSTEM INCLUDES

- ER•4PT earphones
- 5 ft cord with 3.5 mm stereo plug
- 1/4" stereo phone adapter plug
- Assortment of ACCU•Fit™ eartips
- Filter changing tool and replacement ACCU•Filter™ wax filters
- Shirt clip
- Airline adapter
- Travel pouch
- Storage box
- Channel-matching compliance graph



Storage Box



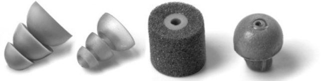
Accessories are available at www.etymotic.com.

PROPER CARE

- Do not expose the earphones to extreme temperatures.
- Avoid dropping and strong impact.
- Leave eartips on the earphones for shock protection.
- Do not pull on the cord to remove the earphone from the audio device or the ear.
- Clean or replace ACCU•Fit™ eartips prior to use by others.
- For best performance and retention in the ear, replace ACCU•Fit™ 3-flange eartips every 3-6 months.
- Replace ACCU•Fit™ foam and glider eartips frequently.

SELECTING AN ACCU•FIT EARTIP

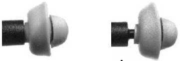
3-flange **Foam** **Glider**



Large **small**

The ACCU•Fit™ eartip that is most comfortable is the likely choice, but it MUST SEAL well in your ear. If you can easily hear others when the device is off, you don't have a good seal. Twist it in deeper, or choose another eartip.

When changing eartips make sure the eartip fits securely on the stem of the earphone.



correct **incorrect**

CLEANING AND REPLACING ACCU•FIT EARTIPS

Over time, eartips may lose their elasticity. For best performance and retention, replace 3-flange eartips every 3-6 months. Replace foam and glider eartips frequently.

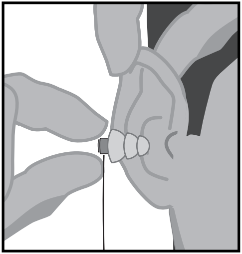
To clean ACCU•Fit™ 3-flange eartips:

1. Remove the eartip from the earphone.
2. Clean with water and mild soap.
3. Dry the eartip before placing it back on the earphone.

PROPER INSERTION

Important: Sound quality, full bass response and noise isolation all depend on a good ACCU•Fit™ eartip seal in the ear canal.

See a video demonstration at www.etymotic.com.



- Carefully insert the earphone while pulling up and out on the back of the ear.
- Twist the earphone up into the ear canal while inserting, until outside noise is blocked out.
- **3-flange eartip:** Moistening eases insertion.
- **Foam eartip:** Roll down or compress foam eartip before inserting. Hold the eartip in place for about 5 seconds while the foam expands to create a tight seal in the ear canal.
- **Glider eartip:** Simply push into ear canal.

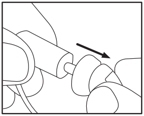
REMOVAL

Remove earphones *slowly* with a twisting motion to gradually break the seal. Do not pull on the cable to remove the earphones.

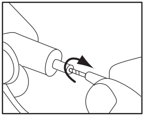
ACCU•FILTERS

Etymotic earphones have special ACCU•Filter™ wax filters that smooth the frequency response and prevent earwax from entering the earphones. An ACCU•Filter is located at the end of the earphone and is visible when the eartip is removed. If a filter becomes clogged, it should be replaced. A dirty ACCU•Filter will reduce earphone output. The filter should be changed if loudness decreases or the sound quality declines. **Note:** ACCU•Filters are not reusable.

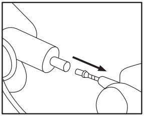
ACCU•Filter Removal **Note: Use the tool to remove the filter.**



1. Remove Eartip.

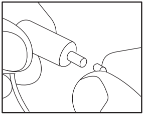


2. Insert tool into the filter.

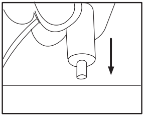


3. Remove filter.

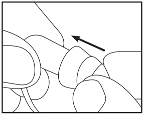
ACCU•Filter Replacement **Note: Do <u>not</u> use the tool to replace the filter.**



1. Insert a new filter.



2. Press gently against a hard surface to secure the filter in place.

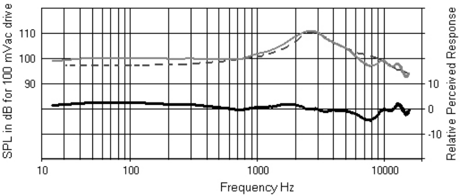


3. Re-attach eartip.

SPECIFICATIONS

Response Accuracy: 86%
Noise Isolation: 35-42 dB
Frequency response: 20 Hz - 16 kHz
Acoustic polarity: + electrical = + acoustic
Transducer type: balanced armature
1 kHz sensitivity: 108 dB SPL for a 0.2 V input (102 dB @ 0.1 V; 106 dB @ 1mW)
Impedance: 27 Ohms nominal
Maximum output: 122 dB SPL
Maximum continuous input: 0.75 Vrms
Cable: 5' with 3.5 mm stereo plug
Weight: less than 1 oz.

Response of ER•4PT Earphones *(measured at eardrum)*



The gray line is the ER•4PT earphones response curve. The dashed line is the target response of the open ear to a live performance. The solid black line represents how a listener perceives the sound.

CAUTION

In rare instances an eartip may come off in the ear canal when removing the earphone. If this should occur and the eartip cannot be easily removed, it is recommended that you promptly contact an audiologist or other medical professional. A professional can use blunt tweezers to remove the eartip.

Consult an audiologist or physician if you have excessive ear wax, difficulty inserting the eartips, or discomfort after prolonged use.

Etymotic earphones exclude most external sounds. It is unsafe to use in-ear earphones while operating a motorized vehicle, operating machinery, bicycling or jogging, because you may not be alerted to potential danger.

Do not listen at excessively loud levels. Research confirms that earphones that seal the ear canal allow listeners to listen at safer levels. Noise-induced hearing loss is a function of exposure time, the average sound level and the peak of very loud sounds. A sealed eartip and lower listening levels allow for longer periods of safe listening.

WARRANTY

Etymotic Research warrants this product against defects in material or workmanship for a period of two years from the date of original purchase from an authorized Etymotic distributor or reseller.

Etymotic will repair or replace the defective product at its option if returned within the warranty period to our service facility. This warranty is in lieu of all other warranties, expressed or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose.

ABOUT ETYMOTIC RESEARCH

Etymotic Research has spent over twenty-five years refining in-ear technology for precision monitoring and critical listening. Etymotic's original insert earphone design, developed for auditory research and clinical testing, used balance armature receivers and established these speakers as the gold standard for high-definition, in-ear earphones. ER•4 MicroPro earphones were the first earphones commercialized using this technology and are recognized as the world leader for response accuracy to which all other earphones are compared.

Etymotic's engineering team is led by founder Dr. Mead Killion, audiologist, engineer, inventor and jazz musician. Etymotic's audio engineers, musicians and audiologists working together have generated over 100 patents issued and pending.

Etymotic's mission is to design products that measure, improve and protect hearing. Etymotic's products are used by musicians and others who insist on superior sound quality. Etymotic means "true to the ear."

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